

February 2008.

Cover Image.

This cover image incorporates high resolution stereo pairs acquired from the DigitalGlobe® QuickBird sensor. It shows a digital elevation model of Meteor Crater, Arizona at approximately 1.3 meter point-spacing. Image analysts used the Leica Photogrammetry Suite to produce the DEM. The outside portion was computed from two QuickBird panchromatic scenes acquired October 2006, while an Optech laser scan dataset was used for the crater's interior elevations. The crater's terrain model and image drape were created in a NASA Constellation Program project focused on simulating lunar surface environments for prototyping and testing lunar surface mission analysis and planning tools.

This work exemplifies NASA's Scientific Data Purchase legacy and commercial high resolution imagery applications, as scientists use commercial high resolution data to examine lunar analog Earth landscapes for advanced planning and trade studies for future lunar surface activities. Other applications include landscape dynamics related to volcanism, hydrologic events, climate change, and ice movement.

Optech scanner data was provided by Darling Environmental & Surveying, Ltd. Meteor Crater Enterprises, Inc. graciously permitted NASA to perform the field campaign. Thanks to Rodney McKellip, Stennis Space Center, for providing the derived 3-D image products from the lunar analog project; for information contact Troy Frisbie @ troy.e.frisbie@nasa.gov.

